

ABSTRACT OF THE DISCLOSURE

A fuel cell system includes fuel cells forming a fuel cell stack, having a fuel passage and an oxidant passage. A purge valve is coupled to the fuel passage to exhaust contaminants, and a controller is coupled to temporarily increase the oxidant stream flow rate through the oxidant passage, and to temporarily open the fuel purge valve, if a voltage across a pair of fuel cells is less than a defined threshold voltage. In this resuscitation step, the oxidant flow rate can be temporarily increased by increasing a duty cycle of an air compressor by approximately 50% for a duration of between approximately 5 to 10 seconds. The controller can further shut down fuel cell operation if a voltage across a pair of fuel cells is less than a defined threshold voltage in an inter-resuscitation period immediately following the resuscitation step.

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